3M Company – Menomonie Plant

2004 Annual Report for the Cooperative Environmental Agreement
Between 3M and the Department of Natural Resources
January 28, 2005

Introduction

On December 22, 2004, following a 30 day public comment period, the Wisconsin Department of Natural Resources (WDNR) and 3M Company - Menomonie amended the Cooperative Environmental Agreement (CEA) for the purpose of providing a reduced air emissions cap, waste reduction based on production activity, and operation flexibility. The Agreement was originally approved on October 1, 2002.

Changes to the amended Agreement included:

- All existing air permits issued to the facility were superseded by a new facility –wide Title V air permit 617056660-P01 (air pollution construction permit #04-SJZ-142) approved on December 21, 2004

- 3M - Menomonie has obtained operational flexibility of existing and new processes requiring air construction permits as outlined in Part III of the Title V operating permit

- 3M – Menomonie agreed to comply with the MACT JJJJ (Paper & other Web Coatings) requirements at the issuance of the Title V permit. The legal compliance date otherwise would have been December 5, 2005

- In the event that in a quarter, both the VOC emissions for that quarter and the four-quarter roll exceed 85% of the year 2000 baseline, 3M will contact DNR for purposes of scheduling a meeting between 3M and DNR. The purpose of any such meeting will be to discuss the trend in VOC emissions and to ensure that DNR is aware of any factors that might be responsible, such as increases which might be associated with a new product line. Any such calculation in excess of 85% of the year 2000 baseline does not constitute a violation of this Agreement.

- Due date for the annual performance report is by January 30 for the preceding year

This 2004 annual performance report is submitted in part to meet the requirements of Section XIII, Baseline and Periodic Performance Evaluations, of the Agreement. Included in the report is the following information concerning the environmental performance of 3M Company – Menomonie during 2004:

- Involvement and input from the Interested Person's Group to the Agreement
- Evaluation of the EMS (Environmental Management System)
- Actual air emissions reductions
- Actual hazardous waste, solid waste and chemical waste reductions
- Actual reportable TRI release reductions

- Status of implementation of an Integrated Contingency Plan (ICP)
- 2004 3P (Pollution Prevention Pays) project summaries
- Changes made to the objectives and targets for the upcoming year (2005)
- Information concerning any non-performance with this Agreement for the previous year.
- Other success/improvements in environmental performance or management
- Evaluation of time/resources saved in environmental administration during 2004 due to the Agreement
- Overall assessment of the success of the Agreement

Regarding the Interested Persons Group:

The 3M Company–Menomonie Interested Persons Group is composed of representatives from business, government and academia in the Menomonie area who are interested in environmental stewardship and the impact of manufacturing on local communities.

Group members include the following individuals:

- Barbara Thomas, Chippewa Valley (WI) Chapter of the Sierra Club
- Mike Beaupre, Director, Indianhead Enterprises
- Keith Bergeson, Dunn County Department of Public Health
- Mark Harings, Wisconsin Department of Natural Resources
- Paul Sterk, Superintendent, Menomonie Wastewater Utility
- Ed Jenson, Superintendent, Menomonie Wastewater Utility (retired)
- Dr. Martin Ondrus, UW-Stout, Chemistry Department
- Ed Smith, City of Menomonie Planning Commission Member

This group met twice during 2004. The first meeting was held on February 27, 2004. The purpose of this meeting was to review the 2003 annual performance report and discuss progress towards approval of the Title V air permit and the flexibility portion (Part III) of the permit.

Attending the meeting from 3M were:

James Mc Sweeney - Menomonie Site Manager
Gary Lewis – Menomonie Environmental, Health, Safety & Security Manager
Mike Wendt – Menomonie EHS Specialist
Wendy Reno – Site Corporate Environmental Engineer

The meeting agenda consisted of the following:

Welcome – Jim McSweeney
Introductions – All
Plant Update – Jim McSweeney
New Projects Requiring Permits – Wendy Reno
Title V Air Permit Update – Wendy Reno
Review 2003 Performance Report – Mike Wendt
Open Forum – All

Attending from the Interested Persons group were Harings, Smith, Ed Jenson, Bergeson, Beaupre and Thomas.

Jim Mc Sweeney, Plant Manager gave the group an overview of 3M-Menomonie and recent developments and projects at the plant. Wendy Reno reviewed the progress of the facility-wide Title V air permit application. She also discussed new projects for the plant that required environmental air construction and operating permits in 2004. Mike Wendt discussed the content of the 2003 environmental performance report with the group.

The second meeting of the Interested Person's Group was held on November 10, 2004. The purpose of this meeting was to review the draft amended Agreement and Title V air permit that was in the 30-day public comment period.

Attending the meeting from 3M were:

James Mc Sweeney - Menomonie Site Manager
Gary Lewis – Menomonie Environmental, Health, Safety & Security Manager
Mike Wendt – Menomonie EHS Specialist
Wendy Reno – Site Corporate Environmental Engineer
Karen Donnelly – Menomonie Waste Coordinator

Attending from the Interested Persons group were Harings and Thomas. The meeting agenda was as follows:

Introductions – All
Plant Update – Jim Mc Sweeney
Review 2004 YTD Environmental Performance – Mike Wendt
Review amended CEA Key Points– Mike Wendt
Title V Air Permit Update – Wendy Reno
Open Forum – All

The meeting was conducted following the above agenda. Thomas had questions on air emissions and how 3M ensured that they would not exceed emission limits if there were process upsets or equipment failures. 3M explained that there were operating and maintenance procedures for their permitted sources and also malfunction and abatement plans that would be followed if these conditions existed to ensure emission limits were not exceeded.

Regarding an Evaluation of the EMS:

The third party auditor, Underwriters Laboratories (UL), recertified the EMS to conformance to the ISO 14001 standard on December 7, 2002. During 2004, two third-party surveillance audits were conducted in March and September. These audits resulted in one action request to improve meeting preventive maintenance completion dates for non-permit required pollution control equipment. This is being addressed in 2005 as part of the Global Environmental Management Self-Assessment (GEMSA) continuous improvement plan. There were thirteen observations for EMS system improvements, of which ten have been addressed in 2004. The remaining three observations (late open action items from incident investigations, procedure revision for internal audit protocol, and clarification of EMP programs related to EMS objectives and targets) are included in the GEMSA continuous improvement plan for 2005.

Internal assessments of the EMS were conducted in all operational and service areas of the facility during the year. These audits resulted in six corrective actions that have been addressed.

Regarding a Summary of 2004 EMS Targets & Objectives:

The 3M-Menomonie facility has identified its environmental aspects and ranked them based on the significance of their environmental impact. Objectives and targets for 2004 were developed in December 2003 and approved by upper management in January 2004. Several of the targets and objectives were based around the corporate Environmental Targets 2005 (ET05) environmental initiatives (reductions in waste, VOCs, TRI chemical releases). A summary of the results for ET'05 2000-2004 are attached in Appendix C.

The 3M Company - Menomonie facility adopted the following Environmental Objectives and Targets for 2004 at Management Review on January 20, 2004:

Objective #1:	**Impact:**	**Aspect:**	**Significance:**
Each operating department to submit at least one approved 3P (Pollution Prevention Pays) project in 2004.	Waste reduction	Process and plant activities and services related to waste and energy reduction	Reduction of overall waste or environmental releases from the site

Target #1:
Submit at least one approved 3P project from each operating department for the facility by 12/31/2004.

Results:

Ten 3P projects were submitted and approved during 2004. A summary of these projects is shown in Table 1:

Table 1

3P Project	Description	$ Saved	Pollution Prevented (tons)	Energy Saved (MMBTU)
SF&C central vacuum energy reduction	Reduce operating hours to when needed	$ 2,300	38 metric tons GHG equivalent	276,000
OSD coated vinyl recycle material	Recycle plastic film to vendor	$ 12,800	80	
TSS yield improvement	Six Sigma yield improvement project increased productivity 5%. This resulted in improved raw material usage and reduced waste.	$ 148,000	42	
E-Beam foam liner recycle	Foam adhesive liner that is removed in a lamination process is	$ 27,000	93	

	recycled and sold to an outside vender.			
E-Beam reuse and recycling of plastic roll cores	Plastic roll cores are reused several times, and then recycled rather than land filled	$ 5,800	1.7	
PCRP MRH/Elastics recycling program	Plastic hook & loop and elastics material is sold to a recycling vendor	$ 164,000	1,053	
610 SOL packaging and handling improvement	Raw material used to make ceramic fiber is repackaged and handled in 55-gallon drums rather than 15-gallon carboys. This has reduced energy use from container cleaning and reduced waste from the cleaning process	$ 2,000	0.8 – wastewater 5.3 metric tons GHG equiv.	100
Fuel Cell platinum catalyst recycling	Scrap materials containing platinum are recycled to a precious metals recycler	$ 39,000	1.2	
SMMD/C5 Adhesive Recycling Program	Scrap hot melt adhesive is sold to a recycling vendor rather than sent to a landfill	$ 8,000	90	
TFTR platinum recycling	Recycling of platinum from the vacuum coating process of developing thin film fuel cell catalyst. (Includes platinum targets and scrapings from shields)	$435,000	0.01	

Total pollution prevented: 1,362 tons

Total $ savings: $ 843,900

Total energy savings: 276,100 MMBTU

GHG emissions reduced: 43.3 metric ton CO_2 equivalent

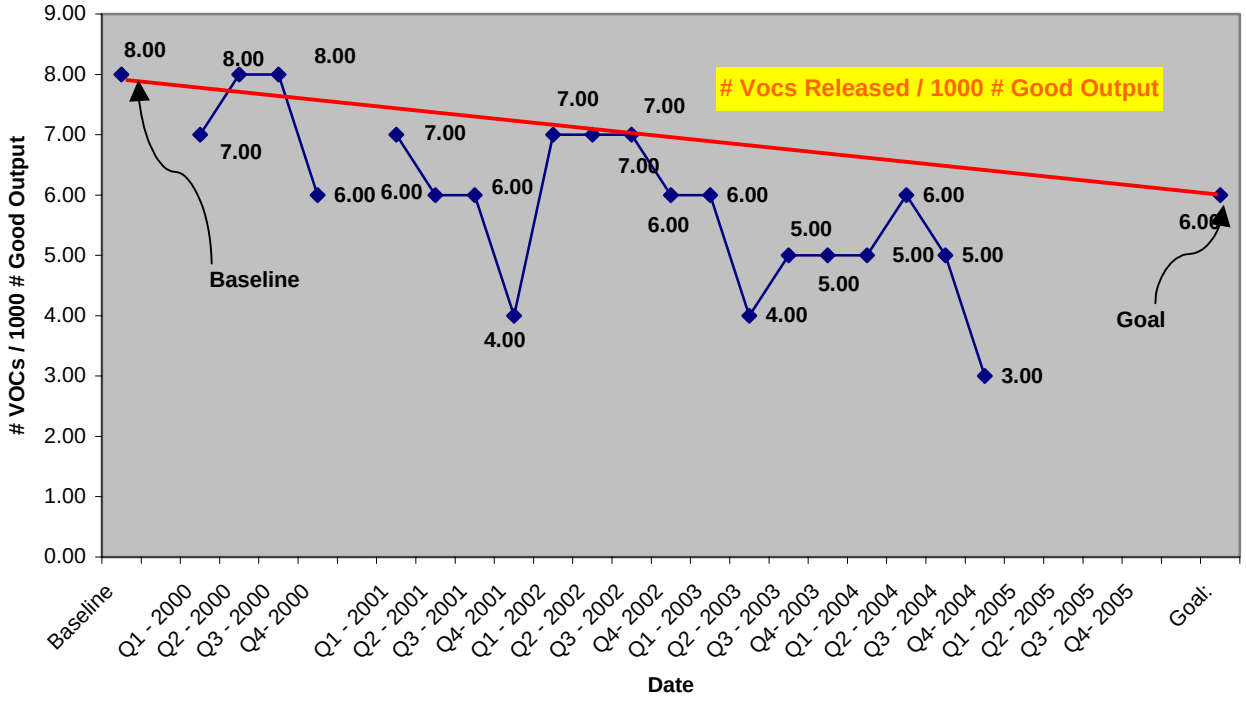
Objective #2:	**Impact:**	**Aspect:**	**Significance:**
Reduce VOC (volatile organic compounds) emissions per pound of good output by at least 5% in 2004 to achieve an overall 25% reduction by the end of 2005.	VOC air emissions	VOC-producing processes in identified departments	A 5% reduction each year is required to meet the corporate goal of a 25% reduction by the end of 2005 (2000 base year)

Target #2:
Reduce # VOC emissions/ # good output (finished, semi-finished, by-product) by 5% from previous year (2003b).

Results:

Figure 1 indicates the progress of reducing pounds of VOC emissions/ pound of good output in 2004 and shows the trend since the baseline year of 2000. In 2004 there was an 8% reduction in this target over 2003 and a 36% reduction since the baseline year of 2000. The facility remains on target to achieve the objective of approximately six pounds of VOC emissions /1000 pounds of good output. Emphasis continued in one of the production groups in the facility that produces various types of adhesive tapes to develop water-based coatings to replace solvent-based coatings. This operation remains the major source of VOC emissions for the facility. Although actual 2004 VOC emissions increased from 2003 by 33%, this was offset by the increase of good output by 44% during the year.

Figure 1



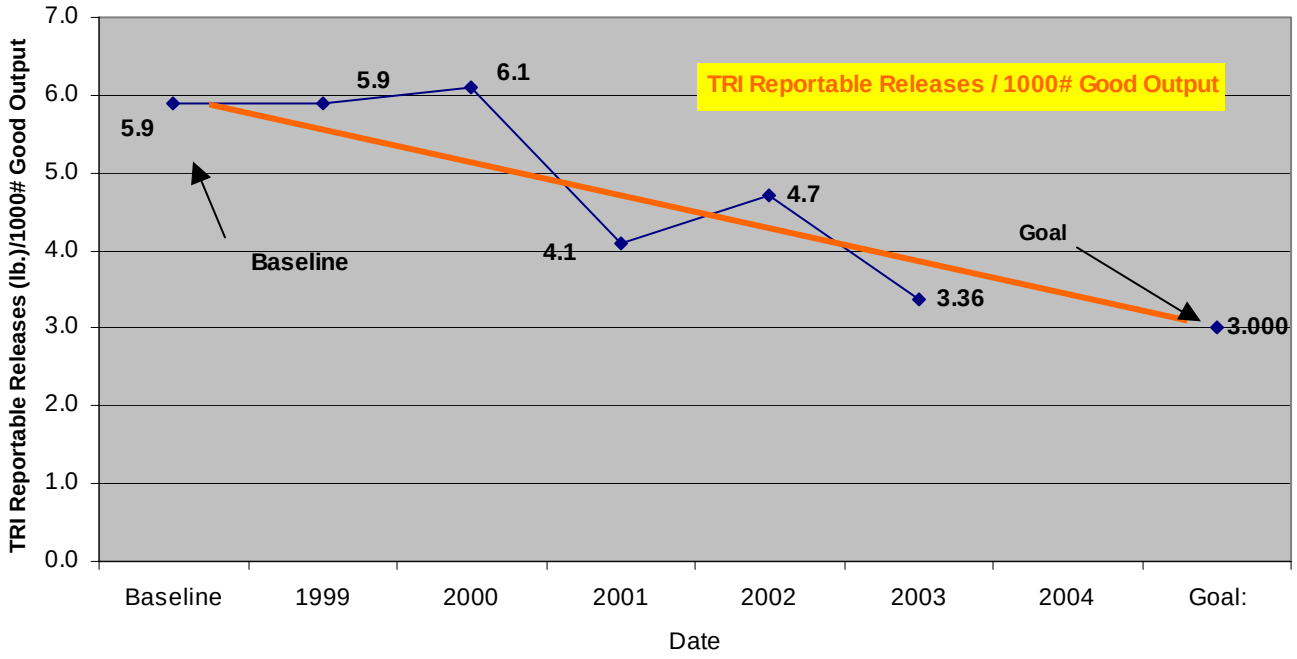
Objective #3:	**Impact:**	**Aspect:**	**Significance:**
Reduce by 10% the reportable releases of 2003 TRI (Toxic Release Inventory) chemicals/ pound of good output as compared to RY 2002.	Release of TRI-reportable air emissions	Processes related to TRI air releases	Corporate ET'05 goal of a 50% reduction in the release of TRI reportable chemicals/pound of good output by 2005.

Target #3:
Reduce 2003 reportable TRI air emissions/ # good output by 10% compared to year 2002 reported TRI releases.

Results:

There was a 29% decrease in the ratio of reportable TRI air emissions released/ # of good output in RY 2003 as compared to RY 2002. This was due in part to MEK (methyl ethyl ketone) not being reported in 2003 due to the reporting threshold of 10,000 pounds. Reported TRI releases were down to 98,500 lbs in 2003 as compared to 111,500 in 2002. There has been a 44% reduction in this ratio overall since the base year of 2000. Based on preliminary estimates for 2004, this ratio is expected to be very close to achieving the overall objective of a 50% reduction in the ratio of TRI chemical releases for the five-year period 2000-2005. These results are shown in Figure 2.

Figure 2



Objective # 4:	**Impact:**	**Aspect:**	**Significance:**
Reduce solid & chemical waste produced/pound of good output at least another 5% in 2004 to achieve an overall reduction of 25% by the end of 2005.	Waste reduction	Activities, products, and services (APS) that produce solid and chemical waste materials	A 5% reduction each year is required to meet the corporate goal of a 25% reduction by the end of 2005 (2000 base year)

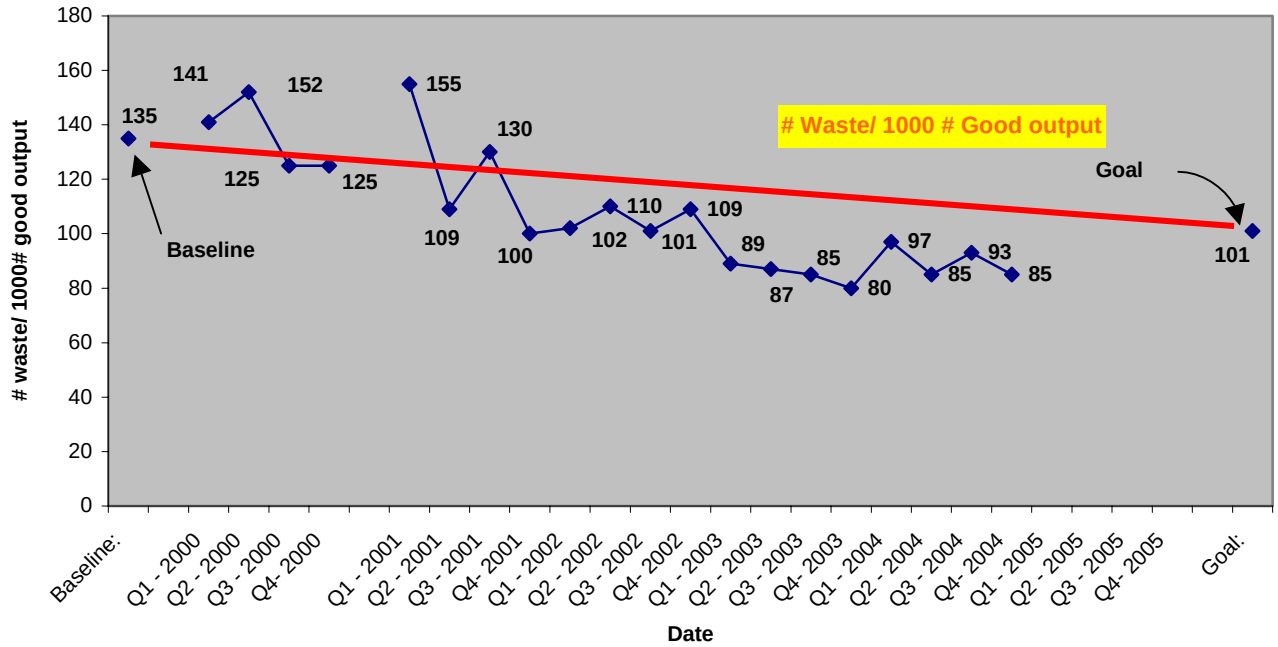
Target # 4:
Reduce solid and chemical waste/ # good output by at least 5% in 2004 based on levels reported in 2003.

Details:
Emphasis was placed on identifying additional process waste that could be recycled. Discuss with operating departments possible 3P and Six Sigma projects for waste reductions. Track emissions and report quarterly under the 3M ET'05 goals program.

Results:

2004 totals for solid and chemical waste produced were 3.5 million pounds compared to 2.2 million pounds for 2003. This was a 59% increase in actual waste produced. There were increased amounts of scrap-coated film that cannot be recycled that accounted for this increase. There was 89 pounds of waste / 1000 pounds of good output produced in 2004 compared to 85 pounds/ 1000 pound of good output in 2003. This was a 5% increase from the previous year, but overall there has still been a 34% decrease in this ratio from the base year of 2000. Refer to Figure 3.

Figure 3



The following table indicates the amount, type, and recovered value of recycled by-product from the facility in 2004:

Table 2: 2004 Recycled Materials

Recycled Waste	Pounds	$ Recovered
Plastics	4,758,746	$668,220
Metals	350,685	$115,134
Aluminum cans	2,515	$1134
Silicone Liners	149,390	$23,073
Office paper	19,303 pounds	
Security waste paper	3,889 pounds	
Cardboard	230,758 pounds	
Recyclable pallets	1,616,226 pounds	
Recycled Drums	2,300 drums	

Objective # 5:	**Impact:**	**Aspect:**	**Significance:**
Meet the requirements of the Wisconsin DNR Cooperative Environmental Agreement and the EPA National Environmental Performance Track (NEPT) for 2004	Pollution prevention	Activities, products, and services (APS) that promote superior environmental performance and stewardship	Promote superior environmental performance with governmental agencies and NGOs

Target # 5:

Meet 2004 WDNR CEA and EPA NEPT requirements.

Details:

WDNR Cooperative Agreement:

- annual report due by 1/30/2004 to WDNR
- Title V air permit approval for entire site by 12/31/2004
- meet with interested person's group as required
- promote flexible permitting into the Agreement
- sign an amended Agreement to reflect changes of the new air permit

EPA NEPT Agreement

- annual report due 4/1/2004
- meet 2004 normalized performance commitments
- public outreach

Results:

WDNR Cooperative Agreement:

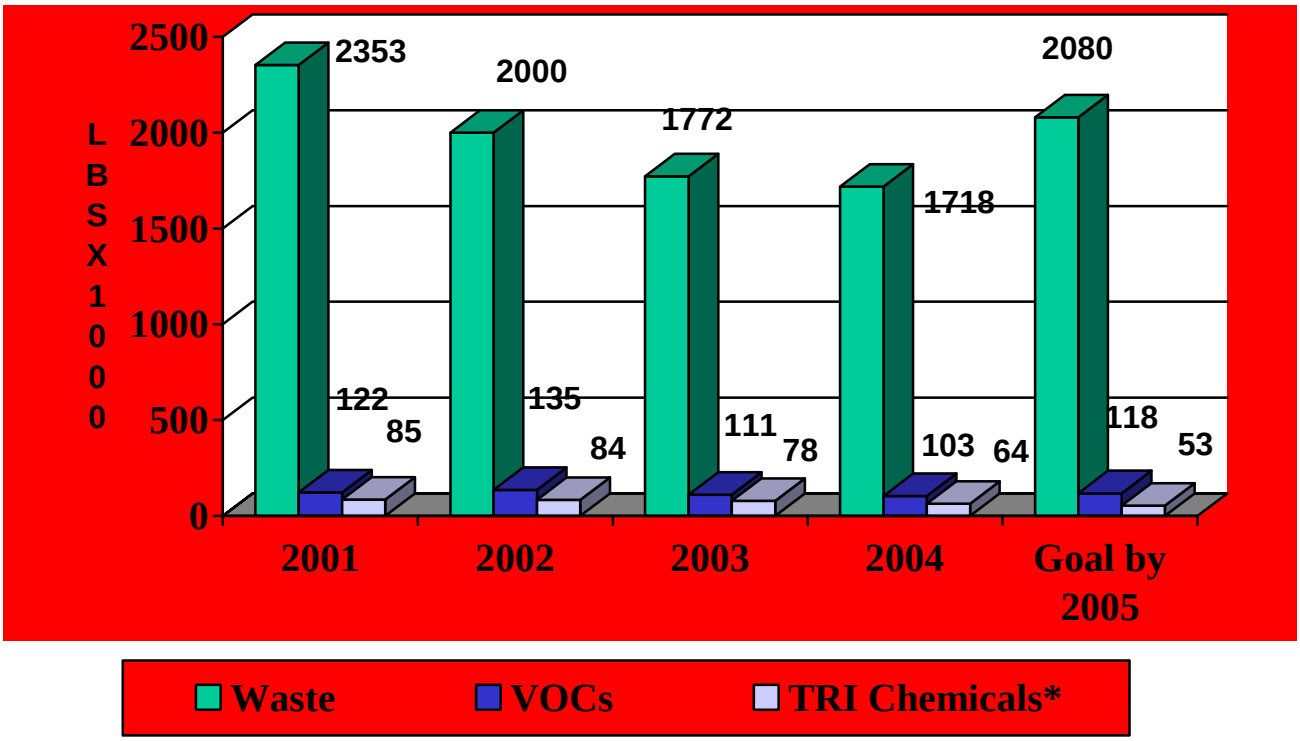
- **Baseline report due by 1/30/2004 to WDNR -** baseline report was submitted to the WDNR on 1/26/2004.
- **Title V air permit approval for entire site by 12/31/2004 –** Title V permit was signed on 12/21/2004 which included the flexibility provisions (Part III of the Title V permit)
- **Interested Persons Group** - the interested person group met twice in 2004. Refer to Interested Persons group section in this report.
- **Amended Agreement** – an amended Agreement reflecting the Title V permit was signed by the WDNR and 3M on 12/22/2004

EPA NEPT Agreement

- **2003 annual report due 4/1/2004 -** the annual report was submitted prior to the deadline and accepted by the USEPA Region V in December 2004. Refer to this link for the report and find the report for 3M-Menomonie: https://yosemite.epa.gov/opei/ptrack.nsf/faMembers?readform

- **Meet 2003 normalized performance commitments -** all environmental performance commitments were met for 2003 (2001 baseline) with the exception of toxic air releases. Refer to the following chart. Results for 2004 are also shown but have not been officially verified for the 2004 NEPT report (TRI chemicals are estimated).

NEPT Goals 2001-2004 – Waste Reductions (normalized for production)



- **Public Outreach –** two news releases were published during 1st quarter, 2004 concerning the CEA and the ET'05 program by local news publications. Refer to Appendix A to see the news release form the Eau Claire Leader Telegram. Through a grant from 3M Community Affairs,

3M-Menomonie supplied the Menomonie Public Schools $ 3,000 for their 2004 Earth Day Challenge I on April 20.

Regarding the status of implementation of an Integrated Contingency Plan (ICP)

The ICP placed into one single plan the following legally required plans that call for emergency response planning: OSHA HAZWOPER plan, RCRA contingency plan, LEPC plan, OSHA Emergency Action Plan, OSHA & 3M PSM standard/guidelines, EPA SPCC spill plan, and the EPA RMP "general duty" clause. The basic outline for the plan was developed using the USEPA template document. The plan was completed and distributed in August, 2004 to the local LEPC, fire, police, and hospital. The completed plan was reviewed with the local Dunn County LEPC committee on March 18, 2004 as part of the regularly scheduled quarterly meeting. The ICP received corporate "best practice" recognition during an internal corporate EHS audit in November, 2004.

Regarding Changes to the 2005 EMS Targets & Objectives:

Listed below are the 2005 EMS Objectives and Targets. The ET'05 program objectives continue to sustain the overall reduction from previous years performance in VOC emissions and waste produced per pound of good output. This is consistent with the five-year plan to reduce these wastes 25% by the end of 2005. The reduction of TRI chemical releases to stay on target to reduce these releases by 50% per pound of good output has also been identified as a 2005 objective and target. In addition, other opportunities to promote continuous improvement in environmental performance have been identified.

2005 EMS Objectives & Targets

- Reduce the ratio of releases of reportable TRI chemicals/ pound of good output reported for 2004 to meet the overall objective of a 50% reduction/pound of good output for RY2004 compared to the ratio for RY1999.

- Sustain or reduce the ratio of solid and chemical waste per pound of good output produced in 2005 to meet the target of reducing the overall waste ratio 25% per pound of good output by the end of 2005 (2000 as the base year).

- Sustain or reduce the ratio of VOC emissions per pound of good output in 2005 to meet the target of reducing overall VOC emissions 25% per pound of good output by the end of 2005 (2000 as the base year).

- Submit at least eight 3P (Pollution Prevention Pays) projects for the site by the end of 2005.

- Improve the self-assessment score for GEMSA in 2005 from 90% to 100%

- Meet the requirements of the Wisconsin DNR Cooperative Environmental Agreement and the USEPA National Environmental Performance Track for 2005

- Reduce waste treatment costs by 20% for regulated and non-regulated waste in 2005

- Develop and implement a formal system for meeting the reporting and recordkeeping requirements of the Title V facility air permit

Regarding Actual Waste Reductions:

A summary of 2003/2004 3M-Menomonie wastes and air emissions is shown in Table 2:

Table 3: 2003/2004 Waste & Air Emissions
(Lb.)

Type of Waste	2003	2004	% Change	Comment
Regulated Hazardous Waste:	169,335	198,052	+ 17 %	All hazardous waste sent to corporate waste incinerator, Cottage Grove, MN.
Parts washer solvents	671	808	+ 20 %	Sent to Safety-Kleen, Lacrosse, WI
Non-regulated chemical waste	90,177	112,981	+ 25 %	Sent to corporate incinerator
Landfill waste	173,650	514,894	+ 197 %	Sent to Dunn County Waste Management
3M proprietary solid Waste	1,145,780	2,584,298	+ 126 %	Proprietary product scrap sent to secured waste facility for energy burn
Waste to Energy	676,080	388,880	- 42 %	Sent to Barron Co. Incinerator for energy burn (not used after June, 2004)
VOC emissions	156,197	208,252	+ 33 %	Reported to 3M Environmental Targets Database (ETD)
Reportable TRI chemicals releases	98,500	130,000 (est.)	+ 32 %	Reported on EPCRA 313 annual report

Waste and emissions “normalized” or adjusted for changes in production activity during these same periods are shown in Attachment B at the end of this report.

Regarding any Public Inquiries or Complaints Concerning the Agreement:

3M Company-Menomonie is not aware of any public inquires or complaints made directly to 3M concerning this Agreement since the Agreement was signed on 10/1/2002 or the amended Agreement of December 22, 2004 other than those filed during the public comment period in November and December, 2004. These comments can be viewed on the WDNR web page: http://www.dnr.state.wi.us/org/caer/cea/ecpp/agreements/3m/index.htm

Regarding any Non-performance with the Agreement from the Previous Year:

3M Company – Menomonie is not aware of any non-performance issues related to this Agreement at this time.

Regarding any Success/Improvements not Specifically Outlined in the Agreement:

The following environmental gains have been accomplished due in part to internal environmental programs and development of the EMS to show continuous improvement in the environmental management system:

- Six Sigma (a 3M formalized problem solving/decision making process) projects identified to improve product yields and reduce waste and scrap produced
- Addition of a thermal oxidizer to reduce emissions from part of the ceramic fibers operation and the elimination of a wet scrubber that produced a large volume of hazardous waste
- Forthcoming renewal of NEPT commitments for period 2005 – 2007 in 2005
- Corporate EHS (environmental, health, & safety) Scorecard/CIP (continuous improvement plan) requirements that include environmental performance requirements (ET'05 goals) and regular management review
- New waste stream profile database on the corporate intranet to aid in the management of hazardous waste
- Consolidated the collection of corrugated cardboard, cardboard cores, waste office paper, newspapers, and magazines to one waste vendor. This has streamlined plant sorting and the handling of these commodities and will save 3M money in storage, handling, and labor costs

Regarding Operational Flexibility:

Requests for operating flexibility for changes to the ceramic fibers process have already been requested in January 2005 in accordance to the flexibility provisions for existing processes named in Part III of the Title V permit.

Regarding additional time requirements for fulfilling this Agreement include:

Requirements Added:	Additional Time
Compiling this Baseline Report	30 hours/year
Managing the Interested Persons Group	18 hours/year

Regarding Overall Assessment of the Success of the Agreement:

Much of 2004 was spent in the preparation, review, and approval of the facility wide Title V air permit. There were many hours of face-to-face meetings, phone conversations, and e-mail exchanges to get the permit and the amended Agreement approved. Special thanks to John Metzger, 3M EHS Operations, and Sonny Zettner, Wisconsin DNR, for the hours spent during

2004 getting the permit and the amended Agreement approved. 3M-Menomonie also appreciates the comments and contributions of the Interested Persons Group during 2004. 3M-Menomonie is looking forward to working with the Department in fulfilling the terms of this Agreement and in the provisions it provides 3M-Menomonie, the Department, and the environment.

Questions and requests for additional information should be directed to Michael Wendt, EHS Department, at the address below:

3M Company – Menomonie Plant
1425 Stokke Parkway
Menomonie, WI 54751
Phone: 715/235-5541
E-mail: mrwendt1@mmm.com

Appendix A News Release

Local News

3/15/2004 12:34:25 PM

On the fast track

DNR, 3M say joint effort could benefit work, environment

Pamela Powers
Menomonie News Bureau

Staff photo by Dan Reiland

Menomonie's 3M plant is one of seven businesses in the state working on a pilot program encouraging environmental cooperation with the DNR. As part of that the company, which employs 500 people, has worked to cut 37 percent of its waste at the plant since 2000. 3-M worker Mike Sol of Menomonie moved a pallet of propylene, which was shredded into beads and recycled.

MENOMONIE — In the high-tech, competitive world in which the Menomonie 3M plant operates, waiting 180 days for a permit to change an operation or add a work line could mean missing out on a business opportunity.

But that could be a thing of the past later this year. The Department of Natural Resources and seven companies in Wisconsin, including 3M, are working on an environmental cooperation pilot program.

The plan would allow 3M and other participants to go ahead with certain additions and projects while giving shorter notice to the DNR. 3M is seeking about a five-day notice.

The other plants are Cook Composites and Polymers, Saukville; Madison Gas and Electric, We Energies and We Energies Pleasant Prairie Power Plant; Northern Engraving of Sparta and Holmen; and Packaging Corp. of America in Tomahawk.

"The difference would be if we decided to add or expand a line the state would say go ahead and do it," said Jim McSweeney, 3M Menomonie's plant manager. "We would be processing all the documentation and ensuring the new equipment meets all the regulations."

This would prevent a delay in meeting product demand, McSweeney said.

“If you’re first, you’re in the door,” he said. “In a competitive world if you can’t supply someone else probably will. Anything the state can do to help us accelerate to meet our customers’ demands the better off we will be.”

Menomonie City Council member Ed Smith is part of an interested persons group for 3M in Menomonie, which includes those in business, government and academia interested in environmental stewardship and the impact of manufacturing on communities.

“I think the cooperative environmental agreement is a win-win situation for everyone involved,” Smith said. “The DNR saves time on the process. It speeds up the process for 3M.”

3M makes a strong commitment to reduce air emissions and waste at all plants, McSweeney said.

In Menomonie, the plant has reduced waste by 37 percent since 2000.

In 2003, 3.05 million pounds of plastics and 186,170 pounds of metals were recycled at the plant. Office paper, cardboard and pallets are also recycled.

Recycling plastics and metals saved 3M more than $287,000 in 2003, said Mike Wendt, an environmental health and safety specialist at the plant.

For example, the waste from a plastic film used in one of the plant’s processes can be ground into pellets and made into plastic coolers or lawn chairs, yet still maintain the company’s proprietary information on the process, Wendt said.

Mark Harings, an environmental assistant coordinator with the DNR in Eau Claire, said working with 3M on the project has been exciting because of their philosophy of environmental sustainability.

“We’re winning from the environmental side, and the company is winning economically,” Harings said.

Smith said the city of Menomonie also wins because recycling to meet the pilot program means fewer items end up in a landfill.

Powers can be reached at (715) 235-9018 or pamela.powers@ecpc.com.

Attachment B: 2004/2003 Wastes Normalized for Production Activity

(All waste in pounds)

2004 Normalizing Factor

$$\frac{\text{Lb. of good output produced in 2004}}{\text{Lb. of good output produced in 2003}} = \frac{42{,}255 \times 10^3}{29{,}334 \times 10^3} = 1.44$$

2004 Normalized Waste Quantity

$$\frac{\text{Lb. of waste produced in 2004}}{\text{2004 Normalizing Factor}}$$

Example: $\frac{\text{Lb. 2004 Regulated Hazardous Waste}}{\text{2004 Normalizing Factor}} = \frac{198{,}052}{1.44} = 137{,}536$

Type of Waste	2003 (Actual)	2004 (Actual)	2004 (Normalized)	% Change
Regulated Hazardous Waste:	169,335	198,052	137,536	- 19 %
Parts washer solvents	671	808	561	-16 %
Non-regulated chemical waste	90,177	112,981	78,459	- 13 %
Landfill waste	173,650	514,894	357,565	+ 106 %
Proprietary solid Waste	1,145,780	2,584,298	1,794,651	+ 57 %
Waste to Energy	676,080	388,880	270,056	- 69.0 %
VOC emissions	156,197	208,252	144,619	- 7 %
Reportable TRI chemical releases	98,500	130,000 (est.)	90,280	- 8 %

Appendix C: Summary of ET'05 Goals 2000-2004

ET'05 Summary **Menomonie**

Metric	1999	2000	2001	2002	2003	2004
Total good output (1000 lbs)	15,929	20,692	20,849	23,510	29,334	42,262
TRI (lbs)	96,674	115,356	84,526	111,500	98,500	
TRI ratio, actual	6.07	5.57	4.05	4.74	3.36	
TRI ratio, target	6.07	5.46	4.86	4.25	3.64	
VOC (1000 lbs)	NA	157	122	155	156	208
VOC ratio, actual (lbs/1000 lbs)	NA	7.6	5.8	6.6	5.3	4.9
VOC ratio, target (lbs/1000 lbs)	NA	7.6	7.2	6.8	6.4	6.1
Waste (1000 lbs)	NA	2,799	2,557	2,462	2,499	3,770
Waste ratio, actual (lbs/1000 lbs)	NA	135.3	122.7	104.7	85.2	89.2
Waste ratio, target (lbs/1000 lbs)	NA	135.3	128.5	121.7	115.0	108.2
Energy usage (MMBtu)	NA	245,544	259,368	254,479	252,716	275,638
Energy ratio, actual	NA	11,866	12,440	10,824	8,615	6,522
Energy ratio, target	NA	11,866	11,392	10,917	10,442	9,968
3P cumulative	NA	NA	3	4	9	18